BioSense

WHAT IS THE PUBLIC HEALTH ISSUE?

The speed at which a public health threat can be detected and characterized is critically important. The faster and more effectively this is accomplished, the quicker the response and containment, resulting in fewer casualties. Consequently, it is paramount that new technologies and methodologies are developed to rapidly detect, quantify, and localize health events while minimizing false alarms, and to facilitate emergency response.

WHAT HAS CDC ACCOMPLISHED?

The BioSense Initiative represents a new methodology for public health surveillance that is dependent on the secondary use of health related data. By providing public health officials with health data, BioSense supports early detection of disease outbreaks related to bioterrorism or naturally occurring events. The Initiative also facilitates the many information needs associated with identifying subsequent cases, determining where the event is and how big it is, and disseminating adequate information needed for investigation and response. As a result, BioSense can improve the Nation's capacity for early detection and quantification of public health threats by advancing real-time surveillance using health data from existing databases and delivering these data and analyses to local, state and national public health officials and investigators.
The BioSense Initiative includes several components such as awarding contracts for data provisioning, developing new early detection data sources, and applying software technology to support data analyses and evaluations. These activities provide a national safety net ensuring that early detection is enabled in most major metropolitan areas. Moreover, it assures data will move rapidly and uniformly across different systems through the implementation of nationally identified standards (e.g. the Public Health Information Network and other national e-government standards). BioSense currently has over 290 users in forty-nine states and thirty-four cities and has received over 159 million health related records to date.

WHAT ARE THE NEXT STEPS?

CDC is working with health data providers to facilitate the delivery of jurisdictionally specific data. Funds will also be awarded to develop new experimental early detection data sources and methodologies and to determine appropriateness for further evaluation and potential implementation. Through the CDC BioIntelligence Center, methods will continue to be developed to improve outbreak detection altgorithms and ways to use numerous data sources to more accurately and rapidly identify outbreaks and minimize the burden of false alarms.